(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 31 December 2003 (31.12.2003)

PCT

(10) International Publication Number WO 2004/001497 A1

(51) International Patent Classification⁷:

G02F 1/167

(21) International Application Number:

PCT/IB2003/002735

(22) International Filing Date: 12 June 2003 (12.06.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

02077531.8 25 Ju 02078456.7 21 Augu

25 June 2002 (25.06.2002) EP

21 August 2002 (21.08.2002) EP

(71) Applicant (for all designated States except US): KONIN-KLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): ZHOU, Guofu [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). HENZEN, Alexander, V. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). JAK, Martin, J., J. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). JOHNSON, Mark, T. [GB/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

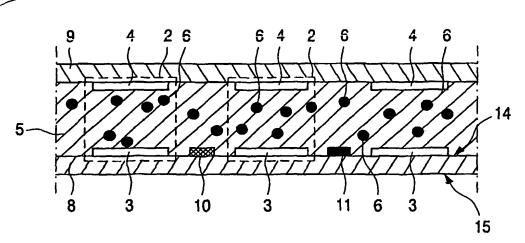
- (74) Agent: DEGUELLE, Wilhelmus, H., G.; Philips Intellectual Property & Standards, Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ELECTROPHORETIC-DISPLAY-PANEL-



(57) Abstract: An electrophoretic display panel (1) for displaying pictures has a first and a second opposed substrate (8,9), an electrophoretic medium (5) between the substrates (8,9), a plurality of pixels (2) and drive means (100). The electrophoretic medium (5) has charged particles (6) in a fluid. The first and the second substrate (8,9) have for each pixel (2) a first and a second electrode (3,4), for receiving a potential difference. The potential difference determines positions of the charged particles (6). The drive means (100) are able to control the potential difference of each pixel (2). The switching time is the time interval to change, in operation, the position of the charged particles (6) between the first and the second electrode (3,4). For the display panel (1) to be able to have a reproducible switching time the display panel (1) further has heating means (13) for heating the medium (5) to a medium temperature in the range of 30 °C and 70 °C.

